



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,370	11/15/2001	Hamid S. Abroy	LEX-80	4701

7590 01/16/2003

SQUARE D COMPANY
1415 South Roselle Road
Palatine, IL 60067

EXAMINER

FITZGERALD, JOHN P

ART UNIT

PAPER NUMBER

3637

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,370

Applicant(s)

ABROY, HAMID S.

Examiner

John P Fitzgerald

Art Unit

3637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 5 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Namely, the recited limitations of “a first opposing ledge” and “a second opposing ledge” do not appear in anywhere in the specification, nor indicated in any of the figures. The specification solely states that the “slots” are formed by the “opposed upper surface” and “lower surface” of the generally parallel “securing ledges.”

3. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 5 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 5 recite the limitations: “a first opposing ledge” and “a second opposing ledge.” As pointed out above, it is unclear if the term “opposing ledge” defines a particular “securing ledge” located immediately adjacent, either above or below another “securing ledge” on a particular “support member,” or a particular “securing ledge” mounted on

Art Unit: 3637

the opposite “support member,” within the same horizontal plane. It appears that the term “opposing” applies to a “securing ledge” immediately adjacent above or below another “securing ledge.” Lastly, claim 5 recites the limitation “first” in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Uchida et al. Uchida et al. disclose an integrally molded housing (14) (Figs. 1 and 2) for securing an arc plate (2), the arc plate including a first longitudinal edge (2a), an opposed second longitudinal edge (2a), a notched first end (16), and a second end (2b) opposed to the first end, the housing having a first support member (14a); a second support member (14a) secured in a spaced relation to the first support member; a first securing ledge (A1) protruding from the first support member and toward the second support member; a first opposing ledge (B1) protruding from the first support member and toward the second support member, the first securing and the first opposing ledge defining a first slot (S1) adapted to receive the first longitudinal edge of the arc plate; a second securing ledge (A2) protruding from the second support member and toward the first support member; a second opposing ledge (B2) protruding from the second support member and toward the first support member, the second securing ledge and the second

Art Unit: 3637

opposing ledge defining a second slot (S2) adapted to receive the second longitudinal edge of the arc plate; a stop member (C) extending into each of the first and second slots, the stop member engaging the first end of the arc plate; and a locking member (21g) (Figs. 8B and 9B) extending into the first and second slots engaging the second end of the arc plates. In specific regards to claim 2, Uchida et al. further disclose resilient stop members (21c) (Figs. 12A-12D) with tabs (21f) extending into the first and second slots engaging the first end of the arc plates, fixing them in place.

7. Claim 6 is rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Uchida et al. Uchida et al. disclose an apparatus (14) (Figs. 1-9), the apparatus having a first wall (14a); a second wall (14a) secured in spaced relation to the first wall; a first slot (S1) formed in the first wall and opening toward the second wall; a second slot (S2) formed in the second wall and opening toward the first wall; a back stop member (C) secured in spaced relation to the first wall; a locking member (21g) secured in spaced relation to the first wall; an arc plate (2) in slidable communication with the first slot and the second slot; whereby the arc plate is secured by the first slot, the second slot, the backstop member and the locking member.

8. Claim 11 is rejected under 35 U.S.C. § 102(b) as being anticipated by Uchida et al. Uchida et al. disclose an apparatus for quenching an arc (14) (Figs. 1-10), the apparatus having an arc stack housing (14) having a first member (14a) secured in spaced relation to a second member (14a), the first member and the second member defining a slot (S1, S2) having a back end (E) and an insertion end (F); a back stop (C) positioned at the back end; a locking member (21g, 22c) positioned at the insertion end; an arc plate (2) insertable into the slot.

Art Unit: 3637

9. Claims 12 and 13 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Uchida et al. Uchida et al. disclose an apparatus for quenching an arc (14) (Fig. 2), the apparatus having an arc stack housing (14); an arc plate (2) (Fig. 5); and a means (2c) for securing the arc plate in the arc housing; the means preventing the arc plate from vibrating in the arc stack housing due to the alternating magnetic field caused by current flowing through the circuit breaker (Uchida et al.: col. 7, lines 33-44).

10. Claims 12 and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Maier et al. Maier et al. disclose an apparatus for quenching an arc (22) (Fig. 2), the apparatus having an arc stack housing (46, 48, 50); an arc plate (44) (Fig. 3); and a means (49, 51) for securing the arc plate in the arc housing; the means preventing the arc plate from vibrating in the arc stack housing by providing a tight clamping of the arc plate resulting in a rugged, unitary apparatus (Maier et al.: col. 2, lines 9-16).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 3 and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al., as applied to claim 1, under 35 U.S.C. § 102(b) above, and in further view of Madock. Uchida et al. disclose a housing for securing an arc plate having all the elements stated previously. Although Uchida et al. disclose an integrally molded housing, Uchida et al. do not

Art Unit: 3637

expressly disclose an integrally molded housing for securing an arc plate wherein the locking member further having a resilient member having a first end fixedly attached to the first securing ledge and having a second end connected to the tab, the tab having an inside face for securing the arc plate in the housing; and wherein the first support member, the second support member, the first securing ledge, the second securing ledge, the stop member, and the locking member form an integral molded assembly. Madock teaches a housing (Figs. 1-7) capable of securing an arc plate having integrally molded supports (12) having resilient stop members (104); locking members (106) including a resilient member (108) and a tab (114), the resilient member having a first end fixedly attached to a first securing ledge (82-90) and having a second end connected to the tab, the tab having an inside face (116) for securing an arc plate in the housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the integrally molded supports with all of the elements taught by Madock, modifying the integrally molded housing, the stop members, the locking members and securing ledges, disclosed by Uchida et al., thus forming an integrally molded assembly consisting of support members, securing ledges, stop members and locking members, thereby substantially reducing the cost of manufacturing of the housing (Madock: col. 4, lines 31-34), as well allowing for the partial ejection of the arc plate from the housing so that it may be easily grasped by a user (Madock: col. 1, lines 39-42). In further regards to claim 4, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the apparatus and all of the elements disclosed by Uchida et al. and Madock, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Art Unit: 3637

13. Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. and Madock. Uchida et al. disclose an integrally molded housing (14) (Figs. 1 and 2) for securing an arc plate (2), the arc plate including a first longitudinal edge (2a), an opposed second longitudinal edge (2a), a notched first end (16), and a second end (2b) opposed to the first end, the housing having a first support member (14a); a second support member (14a) secured in a spaced relation to the first support member; a first securing ledge (A1) protruding from the first support member and toward the second support member; a first opposing ledge (B1) protruding from the first support member and toward the second support member, the first securing and the first opposing ledge defining a first slot (S1) adapted to receive the first longitudinal edge of the arc plate; a second securing ledge (A2) protruding from the second support member and toward the first support member; a second opposing ledge (B2) protruding from the second support member and toward the first support member, the second securing ledge and the second opposing ledge defining a second slot (S2) adapted to receive the second longitudinal edge of the arc plate; a stop member (C) extending into each of the first and second slots, the stop member engaging the first end of the arc plate; and a locking member (21g) (Figs. 8B and 9B) extending into the first and second slots engaging the second end of the arc plates. Uchida et al. further disclose resilient and deformable stop members (21c) (Figs. 12A-12D) with tabs (21f) extending into the first and second slots engaging the first end of the arc plates, fixing them in place. Uchida et al. do not expressly disclose a housing for securing an arc plate wherein the locking member further having a resilient member having a first end fixedly attached to the first securing ledge and having a second end connected to the tab, the tab having an inside face for contact with the arc plate. Madock teaches a housing (Figs. 1-7) capable of securing an arc plate having

Art Unit: 3637

integrally molded supports (12) having resilient stop members (104); locking members (106) including a resilient member (108) and a tab (114), the resilient member having a first end fixedly attached to a first securing ledge (82-90) and having a second end connected to the tab, the tab having an inside face (116) in contact with an arc plate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the integrally molded supports with all of the elements taught by Madock, modifying the housing, the stop members, the locking members and securing ledges, disclosed by Uchida et al., thus forming an integrally molded assembly consisting of support members, securing ledges, stop members and locking members, thereby substantially reducing the cost of manufacturing of the housing (Madock: col. 4, lines 31-34), as well allowing for the partial ejection of the arc plate from the housing so that it may be easily grasped by a user (Madock: col. 1, lines 39-42).

14. Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al., as applied to claim 6, under 35 U.S.C. § 102(b) above, and in further view of Madock. Uchida et al. disclose an apparatus for quenching an arc having all the elements stated previously. Uchida et al. further disclose an apparatus for quenching an arch having a back stop member (C) extending into each of the first and second slots, the back stop member engaging the arc plate; and a locking member (21g) (Figs. 8B and 9B) extending into the first and second slots engaging the second end of the arc plates, and resilient and deformable locking members (21c) (Figs. 12A-12D) with tabs (21f) extending into the first and second slots engaging the arc plates, securing them in place. Uchida et al. do not expressly disclose an apparatus for quenching an arc wherein the back stop member is resilient and deformable, the back stop member being deformed and in contact with the arc plate, whereby the back stop member forces the arc plate

Art Unit: 3637

against the locking member; and wherein the resilient member of the locking member having a first end fixedly attached to the first securing ledge and having a second end connected to the tab, the tab having an inside face for contact with the arc plate. Madock teaches an apparatus (Figs. 1-7) capable of securing an arc plate having an integrally molded wall (12) having back stop members (104) that are resilient and deformable; the back stop member being deformed and in contact with an arc plate, whereby the back stop members force an arc plate against locking members (106); the locking members including a resilient member (108) and a tab (114), the resilient member having a first end fixedly attached to a first securing ledge (82-90) and having a second end connected to the tab, the tab having an inside face (116) in contact with an arc plate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the integrally molded wall with all of the elements taught by Madock, modifying the apparatus for quenching an arc, the walls, the back stop members, the locking members and securing ledges, disclosed by Uchida et al., thus forming an integrally molded assembly consisting of support members, securing ledges, back stop members and locking members, thereby substantially reducing the cost of manufacturing of the housing (Madock: col. 4, lines 31-34), as well allowing for the partial ejection of the arc plate from the housing so that it may be easily grasped by a user (Madock: col. 1, lines 39-42).

15. Claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Uchida et al. and Madock. Uchida et al. disclose an integrally molded apparatus for quenching an arc (14) (Figs. 1-12) having a first wall (14a); a second wall (14a) secured in spaced relation to the first wall; a first slot (S1) formed in the first wall and opening toward the second wall; a second slot (S2) formed in the second wall and opening toward the first wall; an arc plate (2) in slidable

Art Unit: 3637

communication with the first slot and the second slot; a back stop member (C) secured in spaced relation to the first and second wall and extending into each of the first and second slots, the back stop member engaging the arc plate; and a locking member (21g) (Figs. 8B and 9B) secured in spaced relation to the first and second wall and extending into the first and second slots engaging the second end of the arc plates, and resilient and deformable locking members (21c) (Figs. 12A-12D) with tabs (21f) extending into the first and second slots engaging the arc plates, securing them in place against the back stop members. Uchida et al. do not expressly disclose an integrally molded apparatus for quenching an arc wherein the resilient member of the locking member further having a first end fixedly attached to the first securing ledge and having a second end connected to the tab, the tab having an inside face for contact with an arc plate; wherein the back stop member is resilient and deformable, the back stop member being deformed and in contact with the arc plate, whereby the back stop member pushes the arc plate towards the tab. Madock teaches an apparatus (Figs. 1-7) capable of securing an arc plate having an integrally molded wall (12) having locking members (106) including a resilient member (108) and a tab (114), the resilient member having a first end fixedly attached to a first securing ledge (82-90) and having a second end connected to the tab, the tab having an inside face (116) in contact with an arc plate; back stop members (104) that are resilient and deformable; the back stop member being deformed and in contact with an arc plate, whereby the back stop members push an arc plate towards the tab. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the integrally molded wall with all of the elements taught by Madock, modifying the integrally molded apparatus for quenching an arc, the walls, the stop members, the locking members and securing ledges, disclosed by Uchida et al., thus forming an

Art Unit: 3637

integrally molded assembly consisting of walls, securing ledges, stop members and locking members, thereby substantially reducing the cost of manufacturing of the apparatus (Madock: col. 4, lines 31-34), as well allowing for the partial ejection of the arc plate from the housing so that it may be easily grasped by a user (Madock: col. 1, lines 39-42). In further regards to claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the apparatus and all of the elements disclosed by Uchida et al. and Madock, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 3,969,007 to Lowry teaches an apparatus having resilient back stop members and locking members with tabs; US 3,994,550 to Ackeret teaches an apparatus having a resilient back stop member, a locking member with a resilient member and a tab; US 4,678,245 to Fouassier teaches an apparatus having a resilient back stop member, a locking member with a resilient member and a tab, US 4,929,861 to Metcalf teaches an apparatus having a resilient and deformable back stop member pressing an article into the tab of locking members having resilient members, US 5,139,320 to Banker teaches an apparatus having resilient and deformable back stop members pressing an article into the tab of a locking members having resilient members, Yankovitz et al. teach an apparatus for quenching an arc having two walls in spaced relation and arc plates secured in place; US 5,902,024 to Sutherland et al. teach an integrally

Art Unit: 3637

formed apparatus wherein the securing ledges have locking members with resilient members and tabs, De 3,619,241 to Broich teaches an arc extinguishing apparatus with secured arc plates, and JP 2,090,423 to Ishikawa et al. teaches an arc extinguishing apparatus having secured arc plates.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Fitzgerald whose telephone number is (703) 305-4851.

The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai, can be reached on (703) 308-2486. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9302 before final action, and (703) 872-9327 after final action. Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-1113.



JF

01/8/2003

LANNA MAI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

